

PATENT APPLICATION

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Masahiro SAKURADA et al.

Application No.: New U.S. National Stage of  
PCT/JP03/15655

Filed: November 30, 2004

Docket No.: 121876

For: GRAPHITE HEATER FOR PRODUCING SINGLE CRYSTAL, APPARATUS FOR  
PRODUCING SINGLE CRYSTAL, AND METHOD FOR PRODUCING SINGLE  
CRYSTAL

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR §1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

- ☒ 1. This Information Disclosure Statement is being filed (a) within three months of the U.S. filing date of this non-CPA application, OR (b) before the mailing date of a first Office Action on the merits in the present application. No certification or fee is required.
- ☒ 2. Relevance of references 1-2 and 5-7 is discussed in the present specification.
- ☒ 3. The references 3 and 4 were cited in a counterpart foreign application. An English language version of the foreign search report is attached for the Examiner's information.

- ☒ 4. English language Abstracts of the non-English language references 1-4 are attached hereto.
- ☒ 5. A computer-generated English language translation of the following Japanese references has been obtained from the website of the Japanese Patent Office (<http://www.jpo.go.jp>), and is attached, but has not been reviewed for accuracy. See References 3 and 4.

Respectfully submitted,



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<p><b>DEPOSIT ACCOUNT USE</b> <b>AUTHORIZATION</b> Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
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Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE		ATTY DOCKET NO. 121876		APPLICATION NO. New U.S. National Stage of PCT/JP03/15655 <b>10/516347</b>	
INFORMATION DISCLOSURE STATEMENT  (Use several sheets if necessary)				APPLICANTS Masahiro SAKURADA et al.			
				FILING DATE November 30, 2004			
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	
	1	WO 97/21853 w/abstract	06/19/1997	WIPO			
	2	JP A 2000-53486 w/abstr.	02/22/2000	Japan			
	3	JP A 5-43385 w/abstr. + trans.	02/23/1993	Japan			
	4	JP A 9-227286 w/abstr. + trans.	09/02/1997	Japan			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
	5	Voronkov, "The Mechanism of Swirl Defects Formation in Silicon," Journal of Crystal Growth, Vol. 59, No. 3, pp. 625-643, 1982					
	6	Dupret et al., "Global modeling of heat transfer in crystal growth furnaces," Int. J. Heat Mass. Transfer, Vol. 33, No. 9, pp. 1849-1871, 1990					
	7	Vizman et al., "Three-dimensional numerical simulation of thermal convection in an industrial Czochralski melt: comparison to experimental results," Journal of Crystal Growth 233, pp. 687-698, 2001					
EXAMINER					DATE CONSIDERED		
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Date: November 30, 2004